CLAIMS

1. A nickel positive electrode plate including a porous nickel substrate and an active material comprising a hydroxide of nickel filled into said substrate, said positive electrode plate having a layer of a manganese compound containing manganese with a valence of 2 or more on a surface thereof.

2. The nickel positive electrode plate in accordance with claim 1, wherein said active material is a solid solution of a hydroxide of nickel containing at least one selected from the group consisting of cobalt, zinc, magnesium and manganese.

3. The nickel positive electrode plate in accordance with claim 2, wherein said active material has a hydroxide of cobalt on a surface thereof.

4. The nickel positive electrode plate in accordance with any of claims 1 to 3, wherein said layer of a manganese compound has a thickness of 0.1 to 20 μm.

5. An alkaline storage battery comprising: the nickel positive electrode plate in accordance with any of claims 1 to 4; a negative electrode plate; a separator; and an alkaline electrolyte.

6. A method of producing a nickel positive electrode plate comprising the steps of:

(1) filling an active material comprising a hydroxide of nickel into a porous nickel substrate; and

(2) forming a layer of a manganese compound on a surface of said substrate filled with an active material.

7. The method of producing a nickel positive electrode plate in accordance with claim 6, wherein said step (2) is a step of forming a layer of a manganese compound on a surface of said substrate by charging and discharging said substrate filled with an active material at least once, and immersing said substrate in a saturated alkaline solution containing manganese ions.

8. The method of producing a nickel positive electrode plate in accordance with claim 6, wherein said step (2) is a step of forming a layer of a manganese compound on a surface of said substrate by immersing said substrate filled with an active material in a saturated alkaline solution containing manganese ions, while applying a potential thereto.

9. The method of producing a nickel positive electrode plate in accordance with claim 6, wherein said step (2) is a step of forming a layer of a manganese compound on a surface of said substrate by applying a manganese compound containing manganese with a valence of 2 or more onto a surface of said substrate filled with an active material, and immersing said substrate in a saturated alkaline solution containing manganese ions, while applying a potential thereto.

10. A method of producing an alkaline storage battery comprising the steps of:

(1) causing any one of a positive electrode plate, a

negative electrode plate and a separator to retain a powder of metallic manganese or a manganese compound containing manganese with a valence of 2 or more;

(2) assembling a battery by using said positive electrode plate, said negative electrode plate, said separator and an alkaline electrolyte; and

(3) charging and discharging a resultant battery at least once.

11. The method of producing an alkaline storage battery in accordance with claim 10, wherein said step (1) is a step of applying a manganese compound containing manganese with a valence of 2 or more onto a surface of said positive electrode plate.

12. The method of producing an alkaline storage battery in accordance with claim 10, wherein said step (1) is a step of applying a manganese compound containing manganese with a valence of 2 or more onto a surface of said separator.

13. The method of producing an alkaline storage battery in accordance with claim 10, wherein said step (1) is a step of applying a manganese compound containing manganese with a valence of 2 or more onto a surface of said negative electrode plate.

14. The method of producing an alkaline storage battery in accordance with claim 10, wherein said step (1) is a step of adding a powder of metallic manganese or a manganese compound containing manganese with a valence of 2 or more in

said negative electrode plate.

15. The method of producing an alkaline storage battery in accordance with claim 10, wherein said step (1) comprises a step of forming manganese hydroxide in a pore of said separator by immersing said separator in an aqueous solution of a manganese salt, followed by immersing in an aqueous alkaline solution, and another step of drying a resultant separator containing manganese hydroxide in an inert atmosphere or under a reduced pressure.